

AWARD-WINNING BIDDLES CORNER TOLL PLAZA IMPRESSES HIGHWAY DESIGNERS

The recently completed SR 1 toll plaza at Biddles Corner has garnered tremendous praise, winning three prestigious awards.

The Bridge Tunnel and Turnpike Association (BTTA) presented the plaza project team with its Award for Toll Plaza Innovation and Excellence. The award was given for the use of a PEAK smart loop system for counting the axles of vehicles in order to determine toll prices. The smart loop is a highly sensitive device imbedded in the pavement that is able to detect the metal in the axles.



From axle-counting "smart" loops to highway-speed E-ZPass toll gates, the Biddles Corner toll plaza incorporates the latest technology in its award-winning design.

The project team was also awarded the National Quality Initiative's Bronze Award in the "Breaking the Mold" Category. The NQI is a public-private partnership effort concerned with all facets of highway use and construction that stresses quality in the design, construction, and maintenance of the nation's highways. The merit given to the toll plaza project team recognizes the tight teamwork that was shown in constructing the plaza. Several major changes were made at the last minute to incorporate new technology in the toll plaza's design, yet the project was completed and opened on time. This could not have been possible without the teamwork between DelDOT and the many consultants and contractors working on the project.

Finally, the Illuminating Engineering Society of North America, an organization that promotes quality in lighted environments, awarded the plaza project a regional-level International Illumination Design Award. This award reflects the innovation and creativity used in solving the complex lighting of the plaza. Judges were particularly impressed with the energy efficiency of the plaza's lighting, which saves nearly \$19,000 annually.

DelDOT staff is extremely happy with the plaza and the attention it has received since opening in November of 1999. In fact, designers from around the United States have been coming to tour what many engineers consider to be one of the most advanced toll plazas in the nation.



**Delaware Department
of
Transportation**

Nathan Hayward III
Secretary

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Mile STONES

SR 1 IN HOME STRETCH



Ribbon cutting ceremonies for the Puncheon Run section of SR 1 featured former Governor Carper (now Senator Carper) and former DeIDOT Secretary Anne Canby.

The newest section of SR 1, the Puncheon Run Connector to US 13, has opened on schedule. The 2.6-mile roadway establishes a convenient connection between SR 1 and US 13 south of Dover. Four bridges were required to carry the connector over existing wetlands and local roads. In addition to the roadway, a 10-foot wide bike path was built which connects the public services area near the DeIDOT Administration Building along Route 13 to the Capitol Park area of Dover. In the future, the new bike path will connect to the planned St. Jones Greenway network. The ribbon cutting ceremony on December 19, 2000 signaled both the opening of this section and the completion of the southern terminus of the relief route.

Only two sections of the 46-mile long highway remain to be completed. The 4.8-mile North Smyrna to Townsend section began construction in the spring of 2000. Meanwhile, the contract for the 2.8-mile Townsend to Sycamore Farms section was awarded in December to R.E. Pierson of Woodston, NJ. Construction began in February, 2001. Both sections are scheduled to be open in May of 2003.

UNIQUE CONSTRUCTION METHODS FOR OSBORNE WETLANDS



Site of future Osborne wetlands.

When SR 1 project designers looked at constructing a large 94-acre wetland on a site south of Odessa known as the Osborne site, they knew they would not need all 1.5 million cubic feet of fill material that traditional wetland construction techniques would produce.

Designers decided to use a unique way of building wetlands. A series of stepped terraces built out of the natural ground slope allow for the removal of only the necessary amount of material required for nearby highway embankment construction. This method also saves money that would have been used for purchasing material or disposing of excess material.

The US Environmental Protection Agency also asked DeIDOT to re-create, on a portion of the site, a unique type of wetlands known as "Delmarva Bays." These wetlands, unique to the Atlantic coastal plain, are depressions in otherwise flat ground, typically lined with clay and surrounded by a sandy rim, and usually wet for three seasons, while dry during the summer. Rare species of amphibians and reptiles often use the Delmarva Bays to breed. These wetlands are interesting because their formation is not well understood by scientists. Some argue that they are silted-over stream channels, while others suggest they are caused by wind-blown erosion, or even large herds of animals.

Overall, the project should yield a complex of forested wetlands including several acres of seasonally flooded Delmarva Bays. Look for the new wetland to be finished construction in 2003.

One PERSPECTIVE



Donnie Poore, Jr., SR 1 Project Inspector

“One Perspective” is a regular feature of On The Road. The interviews presented here give readers a personal, behind-the-scenes look at planning, design, and construction activities associated with SR 1, the US Route 13 Relief Route.

For this Spring 2001 issue, One Perspective talked with Smyrna native Donald Poore, Jr., a DelDOT construction inspector for the SR 1 project, about his personal connection to the remains of an old bridge foundation found along the new highway’s route south of Odessa.

How was the foundation originally used?

It was part of a bridge that crossed the Sandom Branch as part of the old road, sometimes called the King’s Road, that led down the Delmarva Peninsula.

What is your connection to the old bridge?

My grandfather, William T. Nowland, helped build the bridge in 1917. I believe the project was part of a public works program.

How did he get involved with the project?

He was probably around 25 years old and had left his parents in Pennsylvania and came to Delaware looking for work. The bridge they built was of a good quality, mostly limestone rock that was probably brought in from Pennsylvania, with granite slabs capping its side walls.

What happened to the bridge?

The DuPont Highway replaced the old road in the 1920s. Trees grew up around the bridge and the support foundations were all that were left when the SR 1 project started. The project archaeologists took a look at them before the foundations were removed.

And now you are helping to build another bridge?

Yes, but this one is a bit more complex. The original bridge was something like 30 feet long and just crossed the little creek. We are building a 500-foot long twin bridge structure to carry SR 1 over the DuPont Highway as well as the Sandom Branch and nearby wetlands. Steel and concrete are used instead of limestone and granite. Still, it’s a pretty neat feeling, being connected to the history of the area here.

DID YOU KNOW?

The original King’s Road, which ran from Wilmington to the south end of the Delmarva Peninsula, was built in the early 1800s to provide a reliable land transportation route down the peninsula.



The stone abutments of the 1917 Sandom Branch bridge were among the remains of the original “King’s Road” that traveled the length of the Delmarva peninsula.

On the Road

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TO OUR READERS

The State of Delaware and the project team are committed to continuing the citizen input process during the construction phase of the project. We invite you to write to us with questions or comments regarding *On The Road*

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Environmental issues: contact Terry Fulmer, Environmental Studies Manager, at 302-760-2280
Right-of-way acquisition and relocation: contact Wayne Rizzo, Chief of Real Estate, at 302-760-2228
Construction issues: contact Tom Clements, Construction Engineer, at 302-734-9533

E-ZPASS UPDATE

Even More Savings

E-ZPass customers already save 15% by using the drive-through toll system, but as of October 1, 2000, frequent users can save more. Commuters who pay 30 tolls in any continuous 30-day period will save 50% off the cost of the tolls - a \$2.00 per day savings for a driver who commutes from Wilmington to Dover every day. Commercial drivers also benefit by receiving a flat 50% discount no matter how often they use the tolls. E-ZPass applications are now available at all toll plaza service buildings as well as logging onto www.ezpass.com or calling 1-800-288-6865.

Safety Concerns

As drivers become accustomed to the E-ZPass system, some drive through the tollbooths at unsafe speeds. To curb this unsafe behavior, DelDOT will soon implement a program that identifies speeding drivers and issues up to two warnings by mail. If drivers continue to speed, their E-ZPass privileges will be suspended. It should be noted that this program will not be used in highway-speed E-ZPass toll gates such as those at the Biddles Corner toll plaza.



SR 1 Project Map and Schedules